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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/557,600	04/25/2000	Yonggang Du	PHD 99,056	8246
24737	7590	12/31/2003	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			MILLS, DONALD L	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 12/31/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/557,600

Applicant(s)

DU, YONGGANG

Examiner

Donald L Mills

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

1. Claims 1-5, 7-10, 12-15, and 18 are objected to because of the following informalities:
the terms “configured”, “designed”, “constructed” and “provides” do not clearly express whether the relevant function is actually achieved. Additionally the transitional phrase “comprising”, “consisting essentially of” or “consisting of”, which defines the scope of the claim with respect to what unrecited additional components or steps, if any, are excluded from the scope of the claim, should be added between the preamble and body of claim 1 (See page 7, line 2.)
Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 1, 3, 4, 9, 10, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siu et al. (US 6,552,641 B1), hereinafter referred to as Siu, in view of Naden et al. (US 6,560,206 B1), hereinafter referred to as Naden, in view of Carter (US 6,389,550 B1).

Regarding claims 3, 9, and 10, the previous office action indicated claim 3 would be allowable if re-written in independent form, based upon the available art at that time. However, an updated search has yielded additional art, which reads upon the claims. Therefore, the

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following rejection has been made in this non-final action. The examiner apologizes for any inconvenience this may cause.

Siu discloses *a network with several network clusters of at least one wireless network node* (Referring to Figure 3, a network with a plurality of subscribers and base stations. See column 4, lines 58-63,) *the wireless network node being designed for the wireless transmission of packets in time slots of given length in a time multiplex process* (The wireless network is designed for the transmission of packets utilizing time division multiple access which inherently includes the use of time slots. See column 3, lines 6-8.) *Where the variable length of each packet is at least smaller than the fixed time slot* (Referring to Figure 1, the disclosed network includes a telephony, ATM, IP, and frame relay network which inherently includes packets, such as, null cells that are smaller in length than the fixed time slot.) *Wherein a receiving wireless network node of the wireless network nodes after reception of the packet is designed to receive a packet if the destination of the packet lies in the relevant associated network cluster* (Referring to Figure 5, the base station consists of digital and microwave equipment designed to route traffic over the radio interface, inherently receiving traffic for mobile users which it services. See column 5, lines 37-40.) *These packets are transmitted to all wireless nodes configured for combining data transmission via a point-to-multipoint link* (Signaling between base stations is achieved by a point-to-multipoint system. See column 5, lines 15-25.) *Siu does not disclose a wireless network node that combines several packets into a superpacket; segmenting the superpacket into cells when the length of the superpacket exceeds the length of the fixedly given time slots, and for inserting the cells into several time slots; and forming the superpacket from the cells.*

Naden teaches a more reliable method for transmitting and receiving data packets over a communications link such as a wireless link (See column 3, lines 21-23,) by grouping ATM cells together to form multi-cell frames (Referring to Figure 3, see column 7, lines 58-60.) Carter teaches splitting messages into multiple packets when they are too long for one packet, sending the packets and reassembling the message at the receiving machine (Referring to Figure 5, see column 4, lines 51-53.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the multi-cell grouping method of Naden and message splitting method of Carter in the base station of Siu. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to provide a more reliable and efficient point-to-multipoint wireless network which supports the transmission of long messages, as suggested by Naden in column 5, lines 60-62.

Regarding claims 4 and 14 the primary reference further teaches *wherein one of the wireless network nodes from among the wireless network nodes which form a wireless network is constructed so as to form a central node which is designed to control the radio traffic* (Referring to Figure 5, the base station consists of digital and microwave equipment designed to route traffic over the radio interface. See column 5, lines 37-40.)

Regarding claim 12, Siu discloses *a plurality of network clusters each including a wireless network node* (Referring to Figure 3.) *Wherein a transmitting wireless network node of the wireless network nodes is configured to transmit packets to receiving network nodes of the wireless network nodes* (The wireless network is designed for the transmission of packets utilizing time division multiple access. See column 3, lines 6-8.) *Wherein a receiving wireless*

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network node of the wireless network nodes after reception of a packet is configured to receive the packet if it lies in an associated network cluster of the plurality of network clusters (The wireless network is designed for the reception of packets, inherently for those packets destined to the wireless network, utilizing time division multiple access. See column 3, lines 6-8.) Siu does not disclose wherein several packets are combined into a superpacket; a packet is derived from a superpacket; the superpacket is segmented into cells when a length of the superpacket exceeds a length of a fixedly given time slots, and to insert the cells into several time slots; and receiving wireless network nodes which receive the cells being configured to form the superpacket from the cells.

Naden teaches a more reliable method for transmitting and receiving data packets over a communications link such as a wireless link (See column 3, lines 21-23,) by grouping ATM cells together to form multi-cell frames (Referring to Figure 3, see column 7, lines 58-60.) Carter teaches splitting messages into multiple packets when they are too long for one packet, sending the packets and reassembling the message at the receiving machine (Referring to Figure 5, see column 4, lines 51-53.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the multi-cell grouping method of Naden and message splitting method of Carter in the base station of Siu. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to provide a more reliable and efficient point-to-multipoint wireless network which supports the transmission of long messages, as suggested by Naden in column 5, lines 60-62.

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Regarding claims 3 and 13, the limitations of parent claim 12 have been addressed above. Siu does not disclose *inserting the cells into several time slots of a frame or into one or several time slots of several frames.*

Naden teaches grouping five cells into one frame as a reasonable compromise between length and processing complexity (See column 7, lines 60-61.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the multi-cell grouping method of Naden in the base station of Siu. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to provide a more reliable and efficient point-to-multipoint wireless network as suggested by Naden in column 5, lines 60-62.

5. Claims 5, 6, 11, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siu et al. (US 6,552,641 B1), hereinafter referred to as Siu, in view of Naden et al. (US 6,560,206 B1), in view of Carter (US 6,389,550 B1), and further in view of Pasternak et al. (US 5,936,949), hereinafter referred to as Pasternak.

Regarding claims 5 and 15, the limitations of parent claim 1 have been addressed above. Siu further teaches *a wireless network node which receives packets* (A base station provides wireless access to a subscriber, which inherently uses packets to communicate. See column 1, lines 56-67.) Siu does not disclose *comparing the address identification in the control field of the packet with an address in the network cluster to identify the destination address.*

Pasternak teaches checking the overhead address field to determine whether the received cell should be utilized (See column 13, lines 52-54,) and maintaining a connection table for virtual circuits (See column 14, lines 39-40.) Pasternak further teaches that delegating as many

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functions as possible to the base station, in a point-to-multipoint system, is favorable because it eliminates the need to replicate the same function in all terminals in a network (See column 1, lines 63-67.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the address resolution and connection table of Pasternak in the base station of Siu. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to centralize the transfer of data.

Regarding claims 6 and 16, the limitations of parent claim 1 have been addressed above. Siu further teaches *a wireless network node which receives packets* (A base station provides wireless access to a subscriber, which inherently uses packets to communicate. See column 1, lines 56-67.) Siu does not disclose *a table to store all the addresses of the network cluster*.

Pasternak teaches checking the overhead address field to determine whether the received cell should be utilized (See column 13, lines 52-54,) and maintaining a connection table for virtual circuits (See column 14, lines 39-40.) Pasternak further teaches that delegating as many functions as possible to the base station, in a point-to-multipoint system, is favorable because it eliminates the need to replicate the same function in all terminals in a network (See column 1, lines 63-67.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the address resolution and connection table of Pasternak in the base station of Siu. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to centralize the transfer of data.

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Regarding claim 11, the limitations of parent claim 1 have been addressed above. Siu does not disclose *wherein the receiving wireless network node derives a relevant packet of the packets from the superpacket, the relevant packet having the address designation belonging to the associated network cluster.*

Pasternak teaches checking the overhead address field to determine whether the received cell should be utilized (See column 13, lines 52-54,) and maintaining a connection table for virtual circuits (See column 14, lines 39-40.) Pasternak further teaches that delegating as many functions as possible to the base station, in a point-to-multipoint system, is favorable because it eliminates the need to replicate the same function in all terminals in a network (See column 1, lines 63-67.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the address resolution and connection table of Pasternak in the base station of Siu. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to centralize the transfer of data.

6. Claims 7, 8, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siu et al. (US 6,552,641 B1), hereinafter referred to as Siu, in view of Naden et al. (US 6,560,206 B1) in view of Carter (US 6,389,550 B1) in further view of Freeburg et al. (US 5,940,381) hereinafter referred to as Freeburg.

Regarding claims 7 and 17, the limitations of parent claim 1 have been addressed above. Siu does not disclose *a management system which controls at least one of the wireless network nodes such that the at least one wireless network node provides the establishment of point-to-point connections only instead of point-to-multipoint connections.*

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Freeburg teaches a method of traffic management depending on the flow of data that utilizes a unidirectional point-to-point connection for an upstream connection (See column 5, lines 26-37.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the traffic management system of Freeburg in the base station of Siu. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to minimize data processing.

Regarding claims 8 and 18, the limitations of parent claim1 have been addressed above. Siu further discloses a service for authentication/encryption key management (See column 6, lines 24-26.) Siu does not disclose *sending a key via a point-to-multipoint connection and for sending coded data via a point-to-point connection.*

Freeburg teaches a method of traffic management depending on the flow of data that utilizes a unidirectional point-to-point connection for an upstream connection and a unidirectional point-to-multipoint connection for a downstream connection in a base station to minimize processing (See column 5, lines 26-37.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the traffic management system of Freeburg in the base station of Siu. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to minimize data processing.

Conclusion

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L Mills whose telephone number is 703-305-7869. The examiner can normally be reached on 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Donald L Mills

December 18, 2003



KENNETH VANDERPUYE
PRIMARY EXAMINER